

Application Serial No.: 10/655,143  
Reply to Office Action of April 16, 2008

Atty. Dkt. No.  
UCF-375

### REMARKS/ARGUMENTS

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**APR 23 2008**

Favorable consideration of the above claims is respectfully requested.

The specification has been amended to remove the unidentified symbol,  $\tilde{n}$ , on page 5, line 19 from the text as requested by the Examiner. Applicants also found the symbol on page 7, line 19 and have removed that symbol also. It is believed to symbolic of "free radical;" however, it is used without explanation and is arguably redundant. Accordingly, Applicants respectfully request the withdrawal of the objection to the specification in view of Applicants amendment of the specification set forth above.

Claims 27-33 are pending. Claims 1-26, 28, 30 and 31 were previously canceled. In the present amendment, Applicants have amended independent claim 27 to describe the method for enhancing survivability of living brain cells by the *in-vitro* treatment of brain cell cultures. Support for the amendments to Claim 27 is found on page 5, lines 2-23; and the paragraph bridging pages 7 and 8; original claim 28; Figures 1 and 4. No new matter is added by the amendments.

Claim 29 is amended as suggested by the Examiner, to improve readability; Applicants respectfully request the withdrawal of the objection to Claim 29 in view of the amendment thereto.

Claims 32 and 33 are amended to separately claim a further method of administering cerium oxide nanoparticles to living brain cells, *in-vivo*. Support for the amendment to Claims 32 is found on page 6, lines 13-16; page 7, lines 10-16. Support for the amendment to Claim 33 is found on page 8, lines 13-14. No new matter is added by the amendments.

Specially engineered non-agglomerated particles of cerium oxide enhance the longevity and increase the survivability of living brain cells by acting as a regenerative free

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radical scavenger that are in contact with living brain cells in cultures or in the body and are biologically available for multiple rounds of free-radical scavenging.

Turning now to the Claim Rejections under 35 USC §112 on page 3 of the Office Communication of April 16, 2008, the Examiner states that "Claims 27, 29, 32 and 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.... Particularly, there is no written description of taking the culture of treated *in vitro* brain cells and implanting or administering them *in vivo* to any area of the body." The Examiner continues, "Further, there is no written description of applying a culture of treated brain cells to a stent to treat vascular damage associated with vascular disease and inflammatory response."

Applicants have amended Claims 27, 32 and 33 to conform to the teachings in the specification. Claim 27 requires administering cerium oxide to brain cell cultures *in vitro*; support for this method is found in the specification on page 5, lines 2-23; paragraph bridging pages 7 and 8; original claim 28; page 6, lines 13-16; page 7, lines 10-16; page 8, lines 13-14 and Figures 1 and 4.

Claim 32 is amended to add a further step of administering cerium oxide to living brain cells *in vivo* using a stent; while Claim 33 is amended to add a further step of administering cerium oxide to living brain cells *in vivo* by oral composition, intravenous injection, and the like.

Applicants believe the methodology has been clarified and is claimed as taught in the specification. Treated brain cell cultures are not injected into the body. Non agglomerated particles of cerium oxide are added to living brain cell cultures, *in-vitro* (Claim 27); coated on stents and other vascular replacements, for administration *in vivo* (Claim 32) and added to

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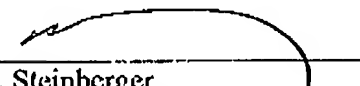
oral pharmaceutical compositions, intravenous injections and the like, also for administration *in vivo* (Claim 33).

Amended claims 27, 29, 32 and 33 are now pending. The application and claims are believed in condition for allowance in view of the amendments and arguments; allowance is respectfully requested.

If the Examiner believes that an interview would be helpful, the Examiner is requested to contact the attorney at the below listed number.

Respectfully submitted,

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